

COMPLAINTS  
7/83-6

University Hygienic Laboratory

(319) 353-5990



1847

25 August 1983

Mr. Merritt Van Lier  
Iowa Department of Water, Air  
and Waste Management  
Regional Office #6  
Box 27  
117 North Second Avenue  
Washington, Iowa 52353

Dear Mr. Van Lier:

The results of the analyses on the sample collected 7/19/83 at the Umthun Trucking well in Buffalo, Iowa (Lab No. 3-3970) are enclosed.

The sample was also analyzed for nitrate (2020 mg/L) and pH (2.7) which are comparable to the previous sample.

The data does not provide any definitive information however it does give some possibilities.

1. The high chloride, sulfate and nitrate is indicative of the presence of all three: nitric, hydrochloric, and sulfuric acids.
2. The manganese and iron are both very high which could be from the material or because of the pH, from naturally occurring sources.
3. The barium level is lower than normally found in ground water.
4. The presence of vanadium at levels higher than lead and chromium is unusual.
5. The levels of chromium, copper, lead, zinc and vanadium are all higher than normally found in ground water.

If we can be of further assistance please contact me.

*Gary Robertson*

Gary Robertson  
Chemist

ChW

Enclosure

cc: Dr. Splinter  
Mr. Frie  
External File

30815347



Superfund

Site: Linwood Mining  
ID: 180980252297  
Branch: 13  
Other: 8-25-83

# WATER QUALITY REPORT

HYGIENIC LABORATORY, Des Moines Branch  
H.A. WALLACE BUILDING  
DES MOINES, IOWA 50319

Town Source Specific Location	Buffalo		
Date Collected Date Received Lab Number	7/19/83 7/27/83 3-3970		
Collection Time pH Temperature Dissolved Oxygen		FIELD DATA	
	BACTERIOLOGICAL EXAMINATION		
Fecal Coliform/100 ml			
	CHEMICAL ANALYSIS (as mg/l unless designated otherwise)		
Conductance (micromhos) MBAS (as LAS) pH (units) Alkalinity: P T			
NITROGEN: Organic N Ammonia N Nitrite N Nitrate N			
Nitrate as NO <sub>3</sub>			
RESIDUE: Total Fixed Volatile			
Filtrable Residue T F V			
Nonfiltrable Residue T F V			
Settleable Matter (ml/l)			
PHOSPHATE: Filtrable P Total P			
Dissolved Oxygen BOD			
COD			
Grease or Oil Turbidity (JTU)			
Total Hardness (as CaCO <sub>3</sub> ) Calcium (Ca <sup>++</sup> ) Magnesium (Mg <sup>++</sup> )			
Chloride (Cl <sup>-</sup> ) Sulfate (SO <sub>4</sub> <sup>-2</sup> ) Manganese Iron	1300 3700 20 77		

REMARKS:

COLLECTION  
DATE

M. VanLier  
Gary Robertson  
Des Moines, Iowa City

W.J. HAUSLER, JR., Ph.D.  
DIRECTOR

8/5 1 7 1983

WATER QUALITY REPORT  
METALS

STATE HYGIENIC LABORATORY, Des Moines Branch  
The University of Iowa  
515-281-537

Town Source Specific Location	Buffalo		
Date Collected	7/19/83		
Date Received	7/27/83		
Lab Number	3-3970		

METALS ANALYSIS (as mg/l unless designated otherwise)

Arsenic	<0.01		
Barium	0.1		
Cadmium	0.05		
Chromium, Total	0.54		
Chromium, Hexavalent			
Copper	3.7		
Lead	0.34		
Mercury	<0.001		
Nickel			
Selenium	<0.01		
Silver	<0.01		
Zinc	6.3		
Vanadium	1.7		

REMARKS:

COLLECTOR  
REPORT TO

M. VanLier  
Gary Robertson  
UHL-Iowa City

Date Reported

AUG 17 1983

W.J. Hausler Jr., Ph.D.  
Director